IN THE CLAIMS:

Please amend the claims to read as follows:

1. (currently amended) A method of inspecting a board with a circuit pattern including at least a porous low-permittivity material or a material similar to it in terms of structure or composition, comprising the steps of:

scanning the circuit pattern with a primary electron beam;

detecting secondary electrons generated, or electrons reflected from the board due to the irradiation, or both the former and latter electrons, and converting the electrons into signals; ~~and~~

transforming the signals into an image, displaying the image, and inspecting circuit pattern~~,~~; and

reducing damage, including shrinkage to the circuit pattern by a primary electron beam ~~being reduced~~ by controlling the irradiation energy and density of the primary electron beam.

2. (original) The method according to claim 1, wherein at least the areas of the circuit pattern to be exposed to the primary electron beam include at least a porous low-permittivity hydrogensilsesquioxane material or a material similar to it in terms of structure or composition.

3. (original) The method according to claim 2, wherein the shrinkage of the circuit pattern due to the exposure to the primary electron beam is reduced to 2.4 nm or less by setting the irradiation energy of the primary electron beam to 300 eV or less.

4. (currently amended) The method according to claim 1, wherein the irradiation density of the primary electron beam is limited according to the irradiation

energy of the primary electron beam and depending on the kind of said low-permittivity material or ~~said~~ similar ~~one~~ material.

5. (original) The method according to claim 1, further comprising a step of recording the irradiation history of the board such as the irradiation energy, probe current, and irradiation density of the primary electron beam and the areas of the circuit pattern to be exposed to the primary electron beam.

6. (original) The method according to claim 1, further comprising the steps of:

finding, in advance, for each material included in the board, the correlations between (i) parameters including the irradiation energy, probe current, and irradiation density of the primary electron beam and (ii) dimensional changes of the circuit pattern; and

adjusting at least one of the parameters before the circuit pattern is scanned with the primary electron beam.

7. (original) The method according to claim 1, wherein the irradiation density of the primary electron beam is controlled by (i) calculating, in advance, the maximum dose of irradiation per unit area in each area of the circuit pattern to be exposed to the primary electron beam and (ii) limiting the irradiation density of the primary electron beam below the maximum dose of irradiation in said area during the inspection of the board.

8. (currently amended) A method of inspecting a board with a circuit pattern including at least a porous low-permittivity material or a material similar to it in terms of structure or composition, comprising the steps of:

scanning the circuit pattern with a primary electron beam;

detecting secondary electrons generated, or electrons reflected from the

board due to the irradiation, or both the former and latter electrons, and converting the electrons into signals; ~~and~~

transforming the signals into an image, displaying the image, and inspecting the circuit pattern~~,~~ and

reducing the shrinkage of the circuit pattern due to the exposure to the primary electron beam ~~being reduced~~ to 2.4 nm or less by setting the irradiation energy of the primary electron beam to 300 eV or less.

9. (original) The method according to claim 7, wherein at least the areas of the circuit pattern to be exposed to the primary electron beam include at least a porous low-permittivity hydrogensilsesquioxane material or a material similar to it in terms of structure or composition.

10. (currently amended) A method of inspecting a board with a circuit pattern including at least a porous low-permittivity hydrogensilsesquioxane material or a material similar to it in terms of structure or composition, comprising the steps of:

scanning the circuit pattern with a primary electron beam;

detecting the secondary electrons generated, or the electrons, reflected from the board due to the irradiation, or both the former and latter electrons and converting the electrons into signals; ~~and~~

transforming the signals into an image, displaying the image, and inspecting circuit pattern~~,~~; and

reducing the shrinkage of the circuit pattern due to the exposure to the primary electron beam ~~being reduced~~ to 2.4 nm or less by (i) setting the irradiation energy of the primary electron beam to 300 eV or less or (ii) setting the irradiation density of the primary electron beam to 1.4 C/m^2 or less if the irradiation energy of

the primary electron beam is about 800 eV or more.

11. (currently amended) An apparatus for inspecting a board with a circuit pattern, at least the areas of the circuit pattern to be exposed to a primary electron beam including at least a porous low-permittivity hydrogensilsesquioxane material or a material similar to it in terms of structure or composition, the apparatus comprising:

~~a~~ means ~~of~~ for scanning the circuit pattern with the primary electron beam;

~~a~~ means ~~of~~ for detecting secondary electrons generated or electrons reflected from the board due to the irradiation or both the former and latter electrons and converting the electrons into signals; and

~~a~~ means ~~of~~ for transforming the signals into an image, displaying the image, and inspecting circuit pattern, damage including shrinkage to the circuit pattern by the primary electron beam being reduced by controlling the irradiation energy and density of the primary electron beam.

12. (original) The apparatus according to claim 11, wherein the shrinkage of the circuit pattern due to the exposure to the primary electron beam is reduced to 2.4 nm or less by setting the irradiation energy of the primary electron beam to 300 eV or less.